New Views

A different way to spec and shop for parts

Nancy Bartels

Information is the name of the game in the 90s. We need more of it; we need it faster; and we need it in infinitely manipulatable and user-friendly form. In many cases, getting it that way is still something of a Holy Grail, somewhere off on the distant horizon. But thanks to computer technology, bit by byte, we're getting there.

The latest fixture of our design and engineering offices that may succumb to the lure of the electronic is the fat industrial products catalog. Many major suppliers are now making parts catalogs, information sheets and brochures available on PC-compatible disks or CD-ROMs. Why stop everything to thumb through 500 closely printed pages of specs when you can call the whole thing up on your screen with the click of a mouse or a couple of key strokes?

The "Killer App"

By far the most elaborate of these new catalogs is the Mechanical Library from Autodesk®. It's a two-volume CD-ROM set of parts and materials specifications that works in conjunction with the company's AutoCAD® system and with other major CAD software.

The library comes in two parts: PartSpec™, which contains information about over 250,000 parts from 29 leading U.S. vendors, and MaterialSpec™, which contains over 100,000 data sheets on over 25,000 materials from more than 300 worldwide vendors. The system runs on either Windows™ or DOS and uses industry-standard file formats, including .DWG, .DBF, ASCII and .GIF.

A typical pair of PartSpec screens for a gear set. Parts drawings can be imported directly into other AutoCAD drawings.

PartSpec includes parts information about machine components, including gears, fluid-based power components and electrical components, plus a library of commonly used ANSI-standard fasteners. Among the companies represented are Boston Gear, Jergens, Inc., Parker Hannifin, Smalley Steel Ring, Square D, Timken and Wolverine Tool. MaterialSpec includes information on plastics, ceramics, metals and composites compiled by Information Indexing, Inc. (Infodex), a leading supplier of materials information in the U.S.

But the library is more than just a parts and materials list. PartSpec has been designed to enable the user to specify a part from a vendor, call up information about it, view drawings and photos and import the drawings into an AutoCAD drawing file as a fully compatible .DWG block. Vendor-supplied attribute data, such as names and part numbers tagged to each part, are embedded in the drawing and can be used for generating parts lists or bills of materials. Pull-down menus in both volumes allow the user to call up vendor information for easy ordering.

The volumes are also designed to be updated periodically to keep the material as current as possible.

System Requirements

The system does require some fairly significant computing power to run. You will need DOS 5.1 or Windows 3.1 or later and a 386/486/Pentium® IBM or 100% compatible PC with a math coprocessor. A minimum of 2 MB of hard disk space, a permanent swap file of 65 MB and at least 8 MB of RAM are recommended. Your system must also have a CD-ROM drive. Autodesk recommends at least a dual-speed drive. A quad-speed drive will, naturally, make data access that much faster. You will also need a VGA video display and a mouse. Running PartSpec on DOS also requires AutoCAD Release 12 or 13 for DOS.

The Price Tag

This ultimate catalog system doesn't come cheap. Each volume can be purchased separately

for $295. The complete set goes for $495. (Both are available at introductory prices of $199 per volume and $350 per set until May of this year.) Autodesk is marketing the library rather like a magazine subscription. The prices include one 6-month update. Subscribers also will be offered renewal discounts, another page taken from publishers' marketing books, according to Chris Hock, Product Marketing Manager for Autodesk Data Publishing.

Still the ease and convenience of the system may make it worth the price. The savings in time alone are significant. When you add up the number of hours spent searching catalogs, comparing prices and specs from different suppliers, drawing parts, checking for and correcting mistakes, and all the other roadblocks to getting a product ready for production, the ROI could come with the first project.

Test Drive

The Mechanical Library sounds pretty impressive on paper, but we wondered how it would work in real life. To find out, we gave a set to Wayne Avers, a manufacturing engineer with Bley Engineering in Elk Grove Village, IL, a company specializing in component parts, subassemblies, machines and reverse engineering.

Wayne played with the system for several weeks, using it on a 90 MHz Pentium machine with 32 MB of RAM, a quad-speed CD-ROM drive and AutoCAD Release 13. He quickly became a convert.

He liked the ease with which both volumes in the library ran. He also was impressed by the completeness of the information in MaterialSpec. The system contained the same information in both the DOS and Windows versions, although Wayne admits the Windows graphics are "cooler."

The feature that sold him on the system was the ability of PartSpec to import parts drawings directly into an AutoCAD drawing. The way it works is this: The operator pulls down menus which open a particular catalog. Then a menu pops up which allows him or her to put in the required parts specifications. If such a part is in the catalog, a picture of it will show up on the screen. Then another couple of mouse clicks import the drawing into the larger AutoCAD drawing.

"It makes it easer to design more accurately and faster because you don't have to draw in parts," says Wayne. "You know from importing the drawing whether a part will work with the rest of the system. That ability gives you, as a designer, the freedom to be wrong. If one part doesn't work, it's no big deal to put in another."

He also points out that it takes only a couple of mouse clicks to move from one catalog to another.

The only downside is that on parts that require a lot of detailed specification, such as gears, the system is sometimes slow in loading the pictures onto the screen. It should be noted, however, that on the day we watched Wayne working with the system, "slow" was a matter of 30 seconds to a minute, rather than instantaneously.

Perhaps the most telling of Wayne's comments in praise of the system was this: "If I could find it on the CD-ROM, I would use that part rather than take the trouble to look for another one in a traditional catalog."

However, it's only fair to point out that we did not test the system on a machine using a different CAD system. Furthermore, according to Autodesk, while the library does run independently of the CAD system in place, the import feature does not work on systems other than AutoCAD. The company hopes in later versions to make the system more flexible.

The Supplier's Point of View

Wayne's comments are encouraging words for Autodesk and the suppliers whose catalogs are part of the library, but what about the rest of us? How does a company get to be part of this new marketing tool?

Autodesk has big plans for its library and welcomes companies wanting to get their catalogs on the system. It has a full-time staff of five that works with companies to adapt their material to the Materials Library format. The cost of getting a space on the CD-ROM depends on the amount of information to be included.

Future Goals

Autodesk does not plan to stop with the Mechanical Library as it is now. It may break down the PartSpec CD into smaller sections with more companies supplying particular types of products on a single volume. Plans are also in the works for plant/process/power and construction/architecture/engineering volumes.

The paper catalog as we know it is not quite on the endangered species list yet. However, as more companies discover the ease and cost-effectiveness of producing catalogs on disk or CD-ROM, as customers discover the ease of using them and as marketing tools like the Mechanical Library gain acceptance, the old paper catalog may find its highest and best use as a doorstop while the speccing of parts and materials goes on in cyberspace. ○

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